

Name: \_\_\_\_\_

### pa1106: Factoring with box when $a = \text{prime}$ (v15)

#### Example

Use the box to factor  $2x^2 - 9x - 18$ .

Guess and check, based on factor pairs of  $-18$ , until you find the pair that results in a linear coefficient of  $-9$  after combining like terms.

*	x	-6
2x	$2x^2$	$-12x$
3	3x	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER:  $(2x + 3)(x - 6)$

#### Question 1

Use the box to factor  $3x^2 + 26x + 16$ .

*	x	8
3x	$3x^2$	$24x$
2	2x	16

ANSWER:  $(3x + 2)(x + 8)$

### Question 2

Use the box to factor  $7x^2 + 33x - 10$ .

*	x	5
7x	$7x^2$	$35x$
-2	-2x	-10

ANSWER:  $(7x - 2)(x + 5)$

### Question 3

Use the box to factor  $5x^2 - 29x + 20$ .

*	x	-5
5x	$5x^2$	-25x
-4	-4x	20

ANSWER:  $(5x - 4)(x - 5)$